

REMARKS/ARGUMENTS

Interview

Applicant's representative wishes to thank the examiner for the courtesy extended in the telephone interview on February 10, 2006. The examiner indicated that the proposed amendments to the specification and claim 1 clarifying that the pneumatic chamber is located coaxially *within* the axle, as shown in Figure 1, would require more than a cursory review of the record and since the application is currently under final rejection this amendment would not be entered or considered. Therefore it was suggested that a Request for Continued Examination along with the amendment be filed.

This paper is a Request for Continued Examination and an amendment.

Content of Amendment

In the specification, the paragraph beginning at page 9 has been amended to clarify that the pneumatic chamber 56 is coaxially disposed within the axle and does not annularly around the axle as clearly shown in Figure 1 of the drawings.

Claims 1-5, 7 and 9-12 remain in this application.

Claims 6 and 8 have been canceled.

Claim 2 has been amended to clarify that the closed air space was the same as that in claim 1.

Claim 3 was amended for grammatical reasons.

Claim 4 was amended to clarify that the air pressure within the closed air space was being measured.

Claim 6 was cancelled in the amendment filed March 14, 2005 and inadvertently reinstated in the amendment filed August 22, 2005. It has now been cancelled to correct this.

Claim 10 has been amended to depend from claim 1. It had previously depended from claim 8 which was cancelled.

In response to the Office Action of November 17, 2005, Applicant requests re-examination and reconsideration of this application for patent pursuant to 35 U.S.C. 132.

Objections to the Claims

Claim 1 was objected to for a grammatical problem. The examiner suggested that a comma(,) be inserted after the words "chamber" and "axle" in line 4. These changes have been made. Applicant respectfully requests withdrawal of the objections in view of the foregoing amendments.

Rejections under 35 USC 112

Claim 11 was rejected under the second paragraph of 35 USC 112. The term "said oil seal" in lines 2 and 3 did not have proper antecedent basis. Claim 11 was inadvertently submitted in the amendment of August 22, 2005 without the amendments made in the amendment filed March 14, 2005. Claim 11 has been returned to the form it was in the amendment filed March 14, 2005 which obviates this rejection. Applicant respectfully requests withdrawal of the rejection under 35 USC 112 in view of the foregoing amendments.

Rejection under 35 USC 103(a)

Claims 1, 2, and 9-11 are rejected under 35 USC 103(a) as unpatentable over Pendleton in view of Goodell et al. ('656). The examiner alleges that:

Pendleton shows a pressurized wheel hub 10 including bearings (15-16) that are rotatably securable to an axle 13, and seals 21 (and hub cap 18, which acts as a seal) mounted between the hub 10 and axle 13. The seals (21 & 18) form a closed air space around the bearings (15-16) to form an annular pneumatic chamber coaxially disposed on the axle 13. Also included are means for measuring (namely air valve 20) the amount of pressurized air within the closed air space.

A sleeve 23 is operatively associated with seal 21 and is securable to the axle 13 (through other elements of the seal 21). This sleeve 23 is not disclosed as being a polished sleeve having a machined surface to permit enhanced sealing. However, it is well known in the art that sleeves to be used in conjunction with a seal member require a smooth or machined surface, that is free of burrs or other

imperfections in order to properly form an airtight seal with the seal member. Any burs or imperfections present on the surface of the sleeve would not only prevent the seal member from seating properly against the surface of the sleeve (thus allowing the seal assembly to leak), but could also cause undue damage to the seal member during installation (thus possibly causing premature failure during use). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the sleeve 23 of Pendleton with a polished machined surface in order to prevent undue damage to the seal member (31 & 35), thus preventing premature failure of the seal during use.

Pendleton does not show the wheel hub including an inlet fluidly coupled to a pressurized air source and an outlet coupled to the closed air space. Goodell et al. teaches the use of a pressurized wheel hub 14 having a closed air space 36. An inlet 43 is fluidly coupled to a pressurized air source and an outlet 45 is coupled to the closed air space 36. The annular pneumatic chamber 36 is located coaxially along and at an end of an axle 12. The inlet 43 is located outside of a seal 60, while the outlet 45 is located within the closed air space 36. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the wheel hub of Pendleton with a conduit to a pressurized air source, for the purpose of allowing the pressure within the hub to be automatically adjusted without direct action by an operator (such as physically attaching an air device to the air valve 20).

Pendleton as modified by Goodell et al. does not specify the type of air source utilized with the pressure hub. However, it is well known in the art to use air compressors to provide a source of pressurized air to a sealed chamber. Further, it is well known in the art that air compressors provided on a vehicle body may be powered by a DC energy source already on the vehicle (such as a battery, etc.). It is further well known in the art to provide the air compressor on any type of vehicle, be it a trailer or a towing vehicle. Therefore from these teachings, it would have been obvious to provide the wheel hub of Pendleton as modified by Goodell et al. with an air compressor powered by a DC energy source, dependent upon availability and cost.

In the instant invention air is supplied to the closed air space around the bearings through a pneumatic chamber 56 which is located coaxially *within* the axle of the wheel. This is set forth at page 9, lines 4-6 of the specification and in the foregoing amendment claim 1 has been amended to clarify this.

In contrast to this, Pendleton employs an air valve 20, which is located on the outer surface of plastic cup 18, to supply air to the interior of the wheel hub. The axle of Pendleton is solid and does not contain a chamber or passageway to supply air to the interior of the wheel hub. Thus there is no teaching or suggestion in Pendleton to supply air to the interior of the wheel hub through a passage disposed coaxially within the wheel axle. Further, since air is supplied to the interior of the wheel hub from a valve located on the plastic cup 18, which functions as a cap to close off the open end of the wheel hub, there is no suggestion or motivation to relocate the air supply to a passageway disposed coaxially within the wheel axle.

The examiner recognizes that the sleeve 23 of Pendleton is not polished and does not have a machined surface to permit enhanced sealing. The examiner alleges that "it is well known in the art that sleeves to be used in conjunction with a seal member require a sufficiently smooth, or machined surface, that is free of burrs or other imperfections in order to properly

form an airtight seal with the seal member" without citing any evidence or supplying any reasoning to support this conclusion.

The examiner relies on Goodell et al. ('656) to teach supplying pressurized air to the closed air space in the wheel hub. The examiner's position is that the air inlet 43 of Goodell et al. is fluidly coupled to a pressurized air source and the outlet 45 is coupled to the closed air space 36. Also, the annular pneumatic chamber 36 is located coaxially along and at an end of an axle 12. As disclosed the annular chamber 36 surrounds the axle 12 of Goodell et al. The examiner considers the closed air space and the annular pneumatic chamber to be the same element. Applicant's invention, on the other hand, has a pneumatic chamber 56 which is coaxially disposed within the axle 18 and has an outlet 60 which is fluidly coupled to the closed air chamber (space) 36. Therefore, if the Pendleton wheel hub were modified, as suggested by the examiner and Goodell et al., the resulting wheel hub would not be the same as applicant's claimed invention.

The examiner recognizes that Goodell et al. do not teach or specify the type of air source used to pressurize the wheel hub. The examiner states that it is well known in the art to use air compressors to provide a source of pressurized air to a sealed chamber. Also, the examiner contents, that it is well known in the art that air compressors on a vehicle body may be powered by

a DC energy source already on the vehicle. The examiner further contents that it is well known in the art to provide the air compressor on any type of vehicle, be it a trailer or a towing vehicle. From these teachings the examiner alleges that it would have been obvious to provide the wheel hub of Pendleton as modified by Goodell et al. with an air compressor powered by a DC energy source, dependent upon availability and cost.

"Official notice without documentary evidence to support an examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, these circumstances should be rare when an application is under final rejection..."

(MPEP 2144.03). The examiner is alleging, by the use of "official notice" that it is well known that sleeves used in conjunction with a seal member require a machined surface that is free of burrs or other imperfections in order to properly form an airtight seal with the seal member. It is also alleged to be well known to use air compressors to supply air to pressurize wheel hubs. Also, it is alleged to be well known that those air compressors may be powered by a DC energy source already on the vehicle. Finally, it is alleged to be well known that the air compressor may be on any type of vehicle such as a trailer or a towing vehicle. As noted by the court in *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the

examiner *must* be "capable of such instant and unquestionable demonstration as to defy dispute". Applicant fails to see that the facts alleged to be "well known" meet this criteria and requests that the examiner cite prior art references or other evidence to support these statements.

"If such notice (official notice) is taken, the basis for such reasoning must be set forth explicitly", *In re Soli*, 317 F.2d 941, 946 137 USPQ 797, 800 (CCPA 1963). The examiner has not set forth any reasoning why the alleged facts are "well known".

The examiner has failed to establish a *prima facie* case of obviousness since all the claimed limitations have not been taught or suggested by the prior art as required in *In re Royka*, 490 F.2d 981, 180 USPQ 580, (CCPA 1974). The pneumatic chamber coaxially disposed within the axle and having an outlet coupled to the closed air space; the pneumatic chamber coupled to a DC air compressor located on the trailer; the pneumatic chamber coupled to a DC air compressor located on a towing vehicle; and a polished sleeve with a machined surface to permit enhanced sealing have not been taught or suggested by the prior art, Pendleton and Goodell et al. ('656).

Applicant submits that the foregoing demonstrates that the combination of Pendleton and Goodell et al. fails to disclose Applicant's invention as recited in claims 1, 2 and 9-11. Applicant submits that the examiner's rejection of claims 1, 2

and 9-11 based on the combination of Pendleton and Goodell et al. are therefore obviated in light of the foregoing arguments.

Claims 3-5, 7 and 12 are rejected as unpatentable over Pendelton in view of Goodell et al. and further in view of Hunt et al. The examiner states that the combination of Pendelton and Goodell et al. does not show a pressure gauge as the means for measuring air within the closed air space. The examiner goes on to allege that it would have been obvious to provide the air valve 20 of Pendelton as modified by Goodell et al. with a pressure gauge for the purpose of providing a simple and easy way of determining the air pressure within the closed air space. Pendelton discloses "An air valve 20 in the cup 18 permits air under pressure to be forced into the hub 10, so that the inside of this hub is maintained under a pressure above atmospheric." (Col. 1. lines 63-66). There is no disclosure in Pendleton or Goodell et al. that the air pressure in the closed air space of the wheel hub is measured or should be measured. Therefore, why would one provide the air valve 20 of Pendleton with a pressure gauge to measure the air pressure in the closed air space. The only suggestion to make this modification is found in applicant's disclosure and is therefore improper, *In re Vaeck*, 947, F.2d 488, 20 USP2d 1438 (Fed. Cir. 1991).

Applicant submits that the foregoing demonstrates that the combination of Pendleton, Goodell et al. and Hunt et al. fails

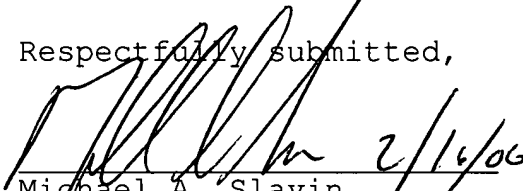
to disclose Applicant's invention as recited in claims 3-5, 7 and 12. Applicant submits that the examiner's rejection of claims 3-5, 7 and 12 based on the combination of Pendleton, Goodell et al. and Hunt et al. are therefore obviated in light of the foregoing arguments.

Because the proposed combinations of references fail to show that which the Applicant now claims as his invention, it is respectfully submitted that the examiner's *prima facie* case of obviousness has been persuasively rebutted. Reconsideration and withdrawal of the examiner's rejections under 35 USC 103(a) and allowance of the claims is respectfully requested.

SUMMARY

In light of the foregoing remarks and amendment to the claims, it is respectfully submitted that the Examiner will now find the claims of the application allowable. Favorable reconsideration of the application is courteously requested.

Respectfully submitted,


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